

CDC INFLUENZA SURVEILLANCE REPORT
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SPECIAL NOTE

Information contained in this report is a summary of data reported to CDC by State Health Departments, Epidemic Intelligence Service Officers, collaborating influenza diagnostic laboratories, and other pertinent sources. Much of it is preliminary in nature and is intended for those involved in influenza control activities. Anyone desiring to quote this information is urged to contact the person or persons primarily responsible for the items reported in order that the exact interpretation of the report and the current status of the investigation be obtained. State Health Officers, of course, will judge the advisability of releasing any information from their own states.

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I. Summary of Information

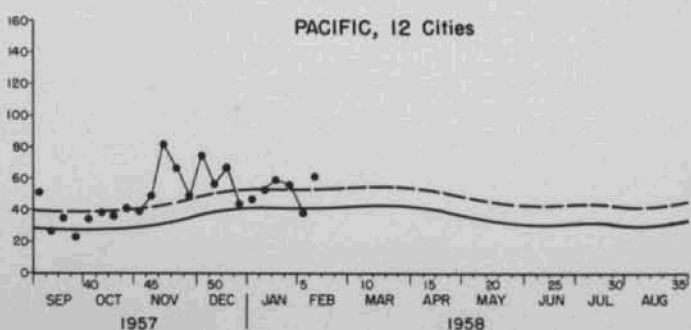
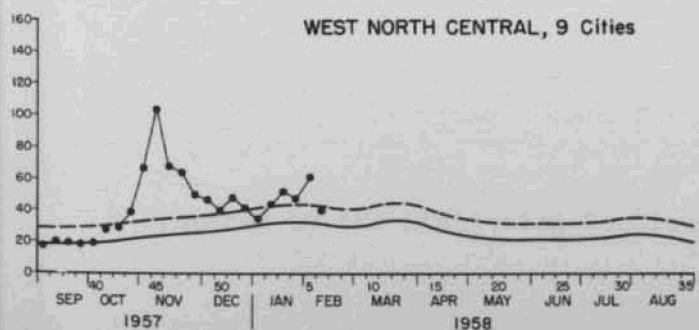
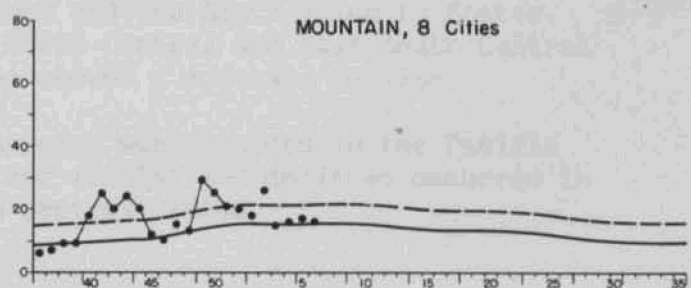
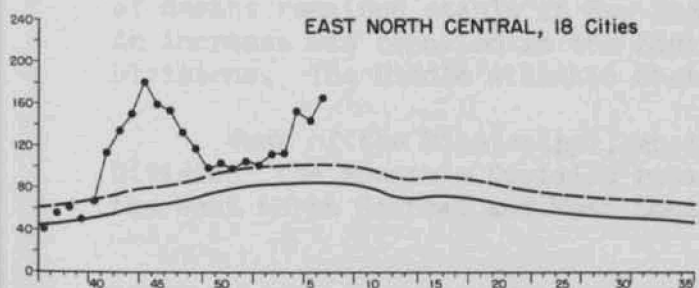
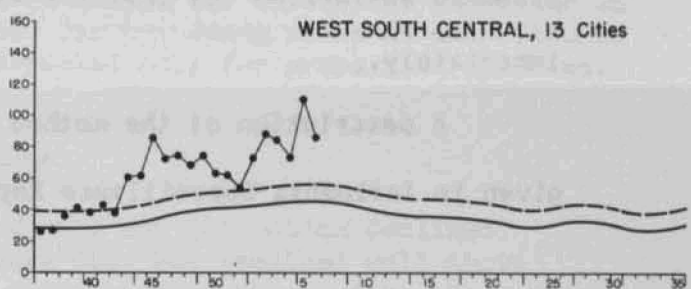
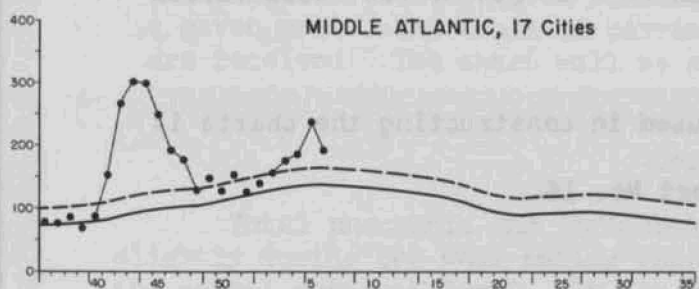
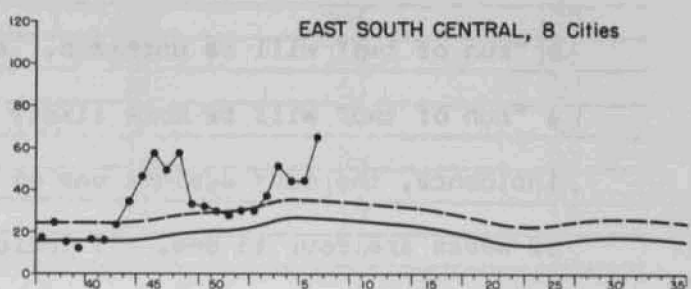
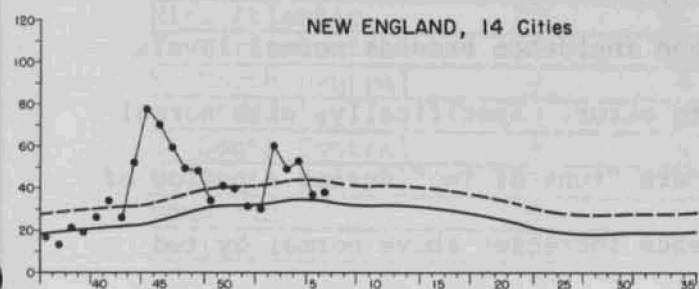
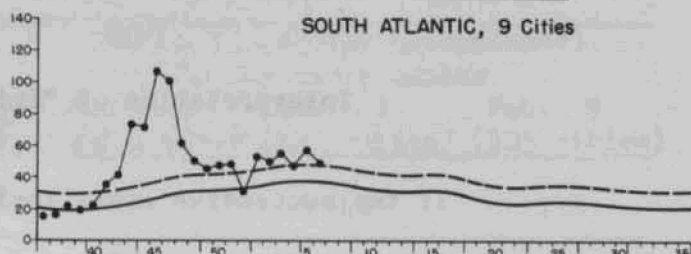
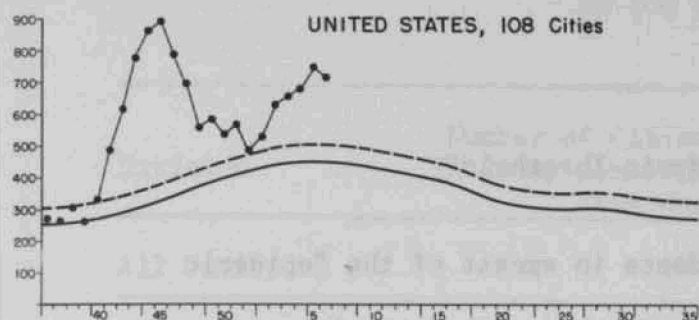
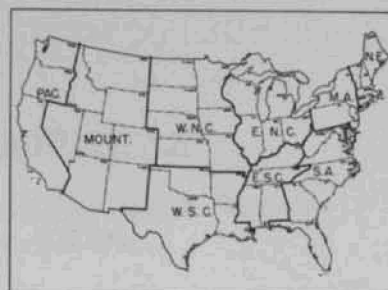
Deaths from influenza and pneumonia in 108 cities have decreased slightly for the first time in six weeks. Mortality in the United States has paralleled that of England throughout the epidemic with a lag in their country of four weeks. It is encouraging to note that the "second" peak was reached in England four weeks ago and there has been a decline since then. Very little is known about the cause of the secondary increase in deaths in either country, however, and the comparison with English data may be of little predictive value.

There is a continued absence of large outbreaks of influenza in this country, despite the elevated influenza and pneumonia death rate. Communications to CDC show that there are probably more sporadic small outbreaks than previously believed, and that these may be responsible for many of the deaths. Laboratories have isolated influenza virus from several pneumonia deaths occurring in mid-January. Most of these had typical influenza histories, and it is not known how many of the total pneumonia deaths may be caused by unsuspected influenza.

We continue to solicit information regarding the elevated pneumonia influenza mortality.

WEEKLY PNEUMONIA AND INFLUENZA DEATHS

--- "EPIDEMIC THRESHOLD"
 — "NORMAL INCIDENCE"
 (SEE EXPLANATION ON BACK OF SHEET)



Interpretation of "Epidemic Threshold"

If two successive weeks incidence in excess of the "epidemic threshold" is defined as a "run of two", then with "normal incidence" a "run of two" will be uncommon. When incidence exceeds normal levels a "run of two" will be more likely to occur. Specifically, with normal incidence, the odds against one or more "runs of two" during a period of 52 weeks are four to one. If incidence increases above normal by two standard deviations the odds are even that a "run of two" will follow immediately.

A description of the method used in constructing the charts is given in Influenza Surveillance Report No. 16.

II. Current Analysis of Influenza and Pneumonia Mortality*

Table I. Current Influenza and Pneumonia Deaths
in 108 United States Cities

Division	Number of Cities In Study Reporting this week		Deaths (including estimates**) during weeks ending		
			Jan. 25 (108 cities)	Feb. 1 (103 cities)	Feb. 8 (105 cities)
All Divisions	108	105	675	744	713
New England	14	14	54	37	38
Mid. Atlantic	17	16	185	236	192
E. North Central	18	16	154	144	166
W. North Central	9	9	46	61	40
S. Atlantic	9	9	48	57	49
E. South Central	8	8	44	44	65
W. South Central	13	13	72	110	86
Mountain	8	8	16	17	16
Pacific	12	12	56	38	61

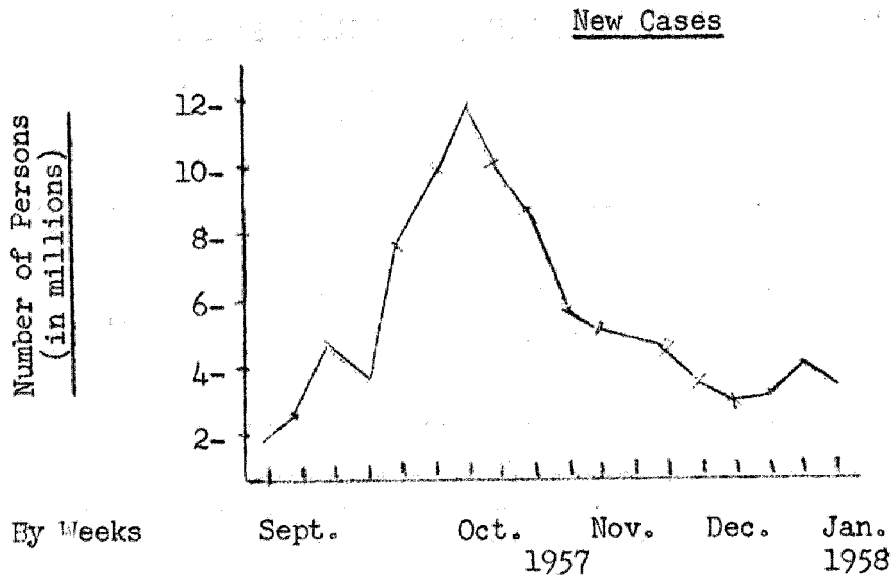
**The number of deaths given includes estimates for cities not reporting in a given week. The table is corrected for preceding weeks as late figures are received. The chart will be corrected only for gross discrepancies.

Comment

Total pneumonia and influenza deaths for the nation declined slightly during the week ending February 8th, but remained well above the normal seasonal level. In the Eastern part of the country the number of deaths remained stable in New England and the South Atlantic States. An increase was reported in the East North Central and East South Central Divisions. The Middle Atlantic States showed a moderate decline.

West of the Mississippi, an increase was recorded in the Pacific Division; the Mountain Division remained stable; and declines occurred in the West North Central and West South Central States.

III. Data from National Health Survey (Under the direction of Dr. F. Linder)



ACUTE UPPER RESPIRATORY DISEASES*
Estimates for continental United States

Week	New Cases Involving One or More Days of Bed Disability
Sept 1 - 7	1,819,000
Sept 8 - 14	2,279,000
Sept 15 - 21	4,487,000
Sept 22 - 28	3,952,000
Sept 29 - Oct 5	7,773,000
Oct 6 - 12	9,712,000
Oct 13 - 19	11,933,000
Oct 20 - 26	11,033,000
Oct 27 - Nov 2	9,808,000
Nov 3 - 9	8,297,000
Nov 10 - 16	5,648,000
Nov 17 - 23	5,305,000
Nov 24 - 30	3,339,000
Dec 1 - 7	4,271,000
Dec 8 - 14	3,667,000
Dec 15 - 21	3,241,000
Dec 22 - 28	3,430,000
Dec 29 - Jan 4	4,092,000
Jan 5 - 11	**3,747,000

*Including influenza, pneumonia, and other similar conditions.

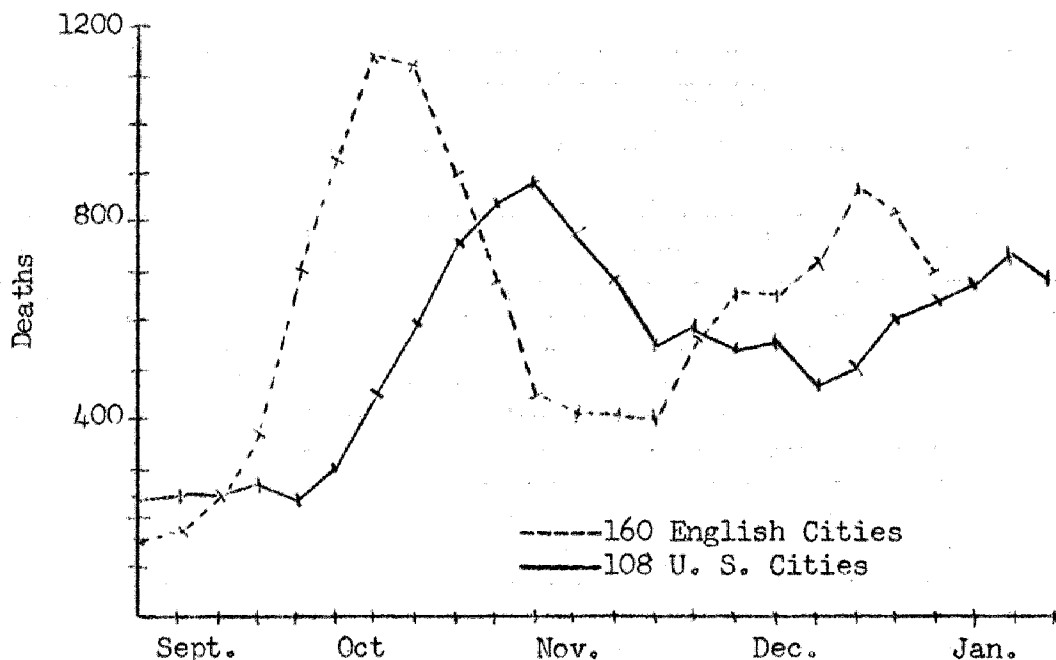
**Provisional.

The above data are compiled from the household interview survey which is a part of the program of the U. S. National Health Survey. The household survey is conducted by trained and supervised lay interviewers. The weekly samples consist of interviews for about 700 households or 2,200 persons. Since data are collected for the two prior weeks, each week's interviewing gives information on 4,400 person-weeks of health experience. Approximate sampling errors are in the range of 15%. The estimates of sampling error do not include allowance for error of response and non-reporting.

IV. Industrial Absentee Rates for 36 Cities of the United States

City	% of Total Absent			
	Average for January 1957	Week Ending (1958)		
		Jan. 18	Jan. 25	Feb. 1
Boston	9.6	9.4	9.6	9.5
Manhattan	4.5	5.0	5.0	5.4
Buffalo	6.9	6.0	6.7	6.4
Syracuse	6.5	6.6	6.2	6.6
Philadelphia	6.3	7.0	7.2	7.5
Pittsburgh	4.9	5.6	5.3	5.5
Washington	7.1	5.5	6.1	6.6
Baltimore	7.1	5.9	6.2	5.9
Richmond	4.9	5.9	6.6	6.2
Atlanta	5.8	4.5	4.8	5.9
Miami	6.7	7.5	9.4	8.5
Memphis	4.7	4.5	5.0	6.1
Birmingham	5.9	3.6	5.2	6.9
Nashville	4.7	4.6	4.4	4.7
Jacksonville	7.8	7.0	6.6	6.6
New Orleans	7.0	7.0	7.4	6.4
Cleveland	3.7	4.0	3.6	3.8
Columbus	5.1	3.6	3.5	5.2
Cincinnati	4.9	4.5	3.9	4.0
Detroit	7.1	7.9	8.7	7.0
Indianapolis	5.4	3.5	4.0	4.5
Milwaukee	6.6	7.6	9.5	8.9
Chicago	6.5	6.7	6.8	7.2
Minneapolis	5.4	5.1	5.2	5.1
Omaha	6.2	6.5	6.0	7.3
St. Louis	4.5	3.9	4.8	5.7
Kansas City	4.0	4.3	7.8	4.6
Houston	4.0	10.3	7.4	6.0
Dallas	4.7	5.3	6.2	6.2
Oklahoma City	4.6	4.0	4.3	4.0
Denver	7.4	6.0	5.9	5.7
Phoenix	7.8	7.0	6.9	7.8
Salt Lake City	4.1	7.3	6.2	7.9
San Francisco	9.4	7.8	7.4	7.5
Seattle	4.8	6.1	6.5	6.4
Los Angeles	5.1	3.7	4.1	4.3

V. English Precedent ?



Influenza-Pneumonia Deaths

Week Ended	108 U.S. Cities	160 English Cities	Week Ended	108 U.S. Cities	160 English Cities
Sept. 7	272	185	Dec. 7	581	556
14	260	292	14	535	664
21	306	394	21	565	668
28	261	700	28	487	718
Oct. 5	328	933	1958		
12	483	1,162	Jan. 4	532	895
19	606	1,145	11	633	833
26	772	901	18	651	686
Nov. 2	859	667	25	675	---
9	887	455	Feb. 1	750	---
16	782	430	8	720	---
23	693	423			
30	557	421			

Dr. Carl Dauer of the National Office of Vital Statistics has noted the striking similarity of influenza-pneumonia mortality in England and the United States. As shown in the graph above, mortality in England began to rise about 4 weeks before it did in this country, and has remained 4 weeks ahead of the United States to the present. Predictions cannot be made from this simple relationship, but it is encouraging to note that mortality in 108 cities has decreased this past week, in keeping with the decrease in England four weeks ago.

VI. Recent Communications

New York - Dr. David Rogers and Dr. Edwin Kilbourne of New York Hospital and Cornell Medical School report an outbreak of febrile illness occurring 3 weeks ago at New York Hospital. The illness was characterized by fever up to 39°, malaise, and occasional coughing. At that time it seemed quite different from their previous influenza experience, in that patients were often relatively asymptomatic. Usually the fever fell to normal within 48 hours. Throat washings on a number of patients are under study. Asian strain influenza was isolated from a house officer who was ill at the same time, but who had a more characteristic influenza picture. Shortly after this (admission 1/26/58) a 60 year old woman was admitted with the following history: eight days before admission, typical influenza. Three days before admission, chills, fever, and increasing cough and dyspnea. Physical examination on admission showed temperature of 40.4°, cyanosis, tachypnea, and extreme dyspnea. There was consolidation of the left lower lobe, diffuse wheezing, and rales. WBC was 1,400 with 14% polys. She died on the second hospital day. Hemolytic Staphylococcus aureus in large numbers was isolated from her sputum and lung, and Asian influenza virus was isolated from the lung. On almost the same day, lung from a 50 year old male with a precisely similar syndrome was received from Bellevue Hospital. No bacteria were isolated from the lung specimens, but influenza virus was obtained.

Note: This was during the recent peak of excess mortality in New York City.

Ann Arbor - Dr. Thomas Francis reports that Asian influenza virus has been isolated from the lung of a 57 year old male dying of pulmonary congestion. The basic diagnosis was rheumatic heart disease, mitral insufficiency. There is a slight increase in clinical cases of influenza in Ann Arbor, but no major upswing.

Mobile - Dr. Keith Jensen, CDC, has isolated Asian influenza from the lung of a 14 year old girl who died recently of pneumonia in Mobile. She became ill on January 10 and died of pneumonia on January 15. Sputum showed gram positive cocci.

Miami - Dr. Michael Sigel, University of Miami, reports the absence of antibodies in several vaccinated individuals. An outbreak of respiratory illness occurred aboard a Coast Guard Cutter shortly before Christmas. There were 39 cases among 128 crew members. The majority of the men had received 0.2 ml intradermal Asian vaccine. Although the clinical impression was adenovirus, Asian influenza virus was recovered from pooled throat washings. It is interesting that the acute phase sera, even in vaccinated individuals, showed very low or negative titers of Asian antibody. Attack rates in vaccinated and non-vaccinated persons were essentially the same. Dr. Sigel is now testing vaccine from the same lot for potency in volunteers, and plans to test the non-ill crew members for antibody titers.

VII. Discussion

For the first time in six weeks, influenza-pneumonia mortality has decreased, but it still remains well above seasonal expectancy. If this country continues to follow the pattern of England as shown in the graph of Section V, then a further decrease may be expected next week. There is no explanation for the recent upsurge in deaths in either country, however, and any such prediction would not be reliable. It is certain that there have been no major outbreaks of influenza recently, but small outbreaks are probably more common than previously thought. In the past two weeks we have received reports of numerous small epidemics in various parts of the country. It is doubtful if these would have been reported to us had we not made specific requests for such information. Laboratories have also been able to isolate Asian influenza from several fatal cases of pneumonia. Most of these deaths had typical influenza symptoms preceding the pneumonia, and it would be more helpful to know the results of a consecutive series of isolation attempts on all pneumonia deaths occurring in some institutions. Perhaps an underlying influenza has gone unsuspected in many of these cases.

The relative increase in pneumonia deaths in the 65+ age group is not explained. It has been suggested that this may be related to the recent severe cold waves seen particularly in the southern part of the country. Although influenza and pneumonia increase during winter months, there is no evidence that cold waves during the winter can cause such large increases in mortality. The correlation certainly seems insufficient to explain the recent peak. (See Herrington & Moriyama, Am. J. Hygiene 29:111, 1939.)